Amalia PatanÃ©

List of Publications by Year
in descending order

137 papers	4,931 citations	147566 31 h-index	98622 67 g-index
138 all docs	138 docs citations	138 times ranked	6213 citing authors

#	Article	IF	Citations
1	Highâ€Performance Phototransistors by Alumina Encapsulation of a 2D Semiconductor with Selfâ€Aligned Contacts. Advanced Electronic Materials, 2022, 8, .	2.6	5
2	Terahertz control of photoluminescence emission in few-layer InSe. Applied Physics Letters, 2022, 120, .	1.5	4
3	Memristive effects due to charge transfer in graphene gated through ferroelectric CuInP₂S₆. 2D Materials, 2022, 9, 035003.	2.0	10
4	Anomalous Low Thermal Conductivity of Atomically Thin InSe Probed by Scanning Thermal Microscopy. Advanced Functional Materials, 2021, 31, 2008967.	7.8	15
5	Universal mobility characteristics of graphene originating from charge scattering by ionised impurities. Communications Physics, 2021, 4, .	2.0	65
6	Lightâ€Induced Stark Effect and Reversible Photoluminescence Quenching in Inorganic Perovskite Nanocrystals. Advanced Optical Materials, 2021, 9, 2100104.	3.6	3
7	CsPb(Br/I)3 Perovskite Nanocrystals for Hybrid GaN-Based High-Bandwidth White Light-Emitting Diodes. ACS Applied Nano Materials, 2021, 4, 8383-8389.	2.4	10
8	Ferroelectric semiconductor junctions based on graphene/In₂Se₃/graphene van der Waals heterostructures. 2D Materials, 2021, 8, 045020.	2.0	16
9	Heavy carrier effective masses in van der Waals semiconductor Sn(SeS) revealed by high magnetic fields up to 150 T. Physical Review B, 2021, 104, .	1.1	1
10	Tunable spin-orbit coupling in two-dimensional InSe. Physical Review B, 2021, 104, .	1.1	9
11	Nondestructive Picosecond Ultrasonic Probing of Intralayer and van der Waals Interlayer Bonding in Î±â€• and Î²â€In₂Se₃. Advanced Functional Materials, 2021, 31, 2106206.	7.8	11
12	Resonance and antiresonance in Raman scattering in GaSe and InSe crystals. Scientific Reports, 2021, 11, 924.	1.6	6
13	Large Tunneling Magnetoresistance in van der Waals Ferromagnet/Semiconductor Heterojunctions. Advanced Materials, 2021, 33, e2104658.	11.1	61
14	Van der Waals SnSe 2(1â^’ x) S 2 x Alloys: Compositionâ€Dependent Bowing Coefficient and Electronâ€“Phonon Interaction. Advanced Functional Materials, 2020, 30, 1908092.	7.8	18
15	Defect-Assisted High Photoconductive UVâ€“Visible Gain in Perovskite-Decorated Graphene Transistors. ACS Applied Electronic Materials, 2020, 2, 147-154.	2.0	13
16	Room temperature upconversion electroluminescence from a mid-infrared In(AsN) tunneling diode. Applied Physics Letters, 2020, 116, 142108.	1.5	1
17	Imaging shape and strain in nanoscale engineered semiconductors for photonics by coherent x-ray diffraction. Communications Materials, 2020, 1, .	2.9	2
18	Enhanced Optical Emission from 2D InSe Bent onto Siâ€Pillars. Advanced Optical Materials, 2020, 8, 2000828.	3.6	17

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19	The Interaction of Hydrogen with the van der Waals Crystal Î³-InSe. Molecules, 2020, 25, 2526.	1.7	11
20	Interlayer Bandâ€toâ€Band Tunneling and Negative Differential Resistance in van der Waals BP/InSe Fieldâ€Effect Transistors. Advanced Functional Materials, 2020, 30, 1910713.	7.8	65
21	High Responsivity and Wavelength Selectivity of GaNâ€Based Resonant Cavity Photodiodes. Advanced Optical Materials, 2020, 8, 1901276.	3.6	24
22	Resonant tunnelling into the two-dimensional subbands of InSe layers. Communications Physics, 2020, 3, .	2.0	22
23	Production and processing of graphene and related materials. 2D Materials, 2020, 7, 022001.	2.0	333
24	Design of van der Waals interfaces for broad-spectrum optoelectronics. Nature Materials, 2020, 19, 299-304.	13.3	106
25	Photoluminescence dynamics in few-layer InSe. Physical Review Materials, 2020, 4, .	0.9	14
26	Two-Dimensional Covalent Crystals by Chemical Conversion of Thin van der Waals Materials. Nano Letters, 2019, 19, 6475-6481.	4.5	32
27	Schottky-barrier thin-film transistors based on HfO2-capped InSe. Applied Physics Letters, 2019, 115, .	1.5	13
28	Hybrid light emitting diodes based on stable, high brightness all-inorganic CsPbI₃ perovskite nanocrystals and InGaN. Nanoscale, 2019, 11, 13450-13457.	2.8	29
29	Enhanced Photoresponse in MoTe₂ Photodetectors with Asymmetric Graphene Contacts. Advanced Optical Materials, 2019, 7, 1900190.	3.6	65
30	Formation and Healing of Defects in Atomically Thin GaSe and InSe. ACS Nano, 2019, 13, 5112-5123.	7.3	35
31	Realization of Universal Quantum Gates with Spinâ€Qudits in Colloidal Quantum Dots. Advanced Quantum Technologies, 2019, 2, 1900017.	1.8	8
32	Photoquantum Hall Effect and Lightâ€Induced Charge Transfer at the Interface of Graphene/InSe Heterostructures. Advanced Functional Materials, 2019, 29, 1805491.	7.8	20
33	Optical Detection and Spatial Modulation of Midâ€Infrared Surface Plasmon Polaritons in a Highly Doped Semiconductor. Advanced Optical Materials, 2018, 6, 1700492.	3.6	3
34	Tunnel spectroscopy of localised electronic states in hexagonal boron nitride. Communications Physics, 2018, 1, .	2.0	33
35	Epitaxial growth of <i>Î³</i> -InSe and <i>Î±</i> , <i>Î²</i> , and <i>Î³</i> -In ₂ Se ₃ on <i>Îµ</i> -GaSe. 2D Materials, 2018, 5, 035026.	2.0	98
36	Gate-Defined Quantum Confinement in InSe-Based van der Waals Heterostructures. Nano Letters, 2018, 18, 3950-3955.	4.5	40

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37	Mid-IR plasmonic compound with gallium oxide toplayer formed by GaSb oxidation in water. Semiconductor Science and Technology, 2018, 33, 095009.	1.0	3
38	Coherent acoustic phonons in van der Waals nanolayers and heterostructures. Physical Review B, 2018, 98, .	1.1	31
39	Magnetotransport and lateral confinement in an InSe van der Waals Heterostructure. 2D Materials, 2018, 5, 035040.	2.0	7
40	Engineering <i>p</i> â€“ <i>n</i> junctions and bandgap tuning of InSe nanolayers by controlled oxidation. 2D Materials, 2017, 4, 025043.	2.0	76
41	Fast, multicolor photodetection with graphene-contacted <i>p</i>-GaSe/<i>n</i>-InSe van der Waals heterostructures. Nanotechnology, 2017, 28, 27LT01.	1.3	180
42	Giant Quantum Hall Plateau in Graphene Coupled to an InSe van der Waals Crystal. Physical Review Letters, 2017, 119, 157701.	2.9	44
43	Microwave Generation in Synchronized Semiconductor Superlattices. Physical Review Applied, 2017, 7, .	1.5	12
44	High electron mobility, quantum Hall effect and anomalous optical response in atomically thin InSe. Nature Nanotechnology, 2017, 12, 223-227.	15.6	996
45	The direct-to-indirect band gap crossover in two-dimensional van der Waals Indium Selenide crystals. Scientific Reports, 2016, 6, 39619.	1.6	150
46	Quantum confinement and photoresponsivity of <i>Î²</i> -In ₂ Se ₃ nanosheets grown by physical vapour transport. 2D Materials, 2016, 3, 025030.	2.0	88
47	Resonant Zener tunnelling via zero-dimensional states in a narrow gap diode. Scientific Reports, 2016, 6, 32039.	1.6	4
48	Surface Sensing of Quantum Dots by Electron Spins. Nano Letters, 2016, 16, 6343-6348.	4.5	8
49	Phonon-Assisted Resonant Tunneling of Electrons in Grapheneâ€“Boron Nitride Transistors. Physical Review Letters, 2016, 116, 186603.	2.9	78
50	Nanomechanical probing of the layer/substrate interface of an exfoliated InSe sheet on sapphire. Scientific Reports, 2016, 6, 26970.	1.6	14
51	High Broadâ€Band Photoresponsivity of Mechanically Formed InSeâ€“Graphene van der Waals Heterostructures. Advanced Materials, 2015, 27, 3760-3766.	11.1	320
52	Genesis of â€œSolitary Cationsâ€•Induced by Atomic Hydrogen. Advanced Functional Materials, 2015, 25, 5353-5359.	7.8	6
53	Ligandâ€Induced Control of Photoconductive Gain and Doping in a Hybrid Grapheneâ€“Quantum Dot Transistor. Advanced Electronic Materials, 2015, 1, 1500062.	2.6	59
54	Peculiarities of the hydrogenated In(AsN) alloy. Semiconductor Science and Technology, 2015, 30, 105030.	1.0	4

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55	Electron spin coherence near room temperature in magnetic quantum dots. Scientific Reports, 2015, 5, 10855.	1.6	15
56	H-tailored surface conductivity in narrow band gap In(AsN). Applied Physics Letters, 2015, 106, .	1.5	4
57	Resonant tunnelling between the chiral Landau states of twisted graphene lattices. Nature Physics, 2015, 11, 1057-1062.	6.5	64
58	Room Temperature Electroluminescence from Mechanically Formed van der Waals IIIâ€"VI Homojunctions and Heterojunctions. Advanced Optical Materials, 2014, 2, 1064-1069.	3.6	71
59	Spin manipulation and spin-lattice interaction in magnetic colloidal quantum dots. Physical Review B, 2014, 90, .	1.1	14
60	Quantum confined acceptors and donors in InSe nanosheets. Applied Physics Letters, 2014, 105, 221909.	1.5	58
61	Subterahertz Chaos Generation by Coupling a Superlattice to a Linear Resonator. Physical Review Letters, 2014, 112, 116603.	2.9	48
62	Quantum oscillations in the photocurrent of GaAs/AlAsp-i-ndiodes. Physical Review B, 2014, 89, .	1.1	11
63	Impact ionization and large room-temperature magnetoresistance in micron-sized high-mobility InAs channels. Physical Review B, 2014, 90, .	1.1	6
64	Tuning the Bandgap of Exfoliated InSe Nanosheets by Quantum Confinement. Advanced Materials, 2013, 25, 5714-5718.	11.1	512
65	High Curie temperatures at low compensation in the ferromagnetic semiconductor (Ga,Mn)As. Physical Review B, 2013, 87, .	1.1	34
66	Effects of Bi incorporation on the electronic properties of GaAs: Carrier masses, hole mobility, and Biâ€induced acceptor states. Physica Status Solidi (B): Basic Research, 2013, 250, 779-786.	0.7	18
67	Nonresonant hydrogen dopants in In(AsN): A route to high electron concentrations and mobilities. Physical Review B, 2013, 87, .	1.1	10
68	A micrometer-size movable light emitting area in a resonant tunneling light emitting diode. Applied Physics Letters, 2013, 103, .	1.5	3
69	Paramagnetic, Nearâ€Infrared Fluorescent Mnâ€Doped PbS Colloidal Nanocrystals. Particle and Particle Systems Characterization, 2013, 30, 945-949.	1.2	17
70	Effects of hydrogen on the electronic properties of Ga(AsBi) alloys. Applied Physics Letters, 2012, 101, .	1.5	11
71	Band-gap profiling by laser writing of hydrogen-containing III-N-Vs. Physical Review B, 2012, 86, .	1.1	18
72	Nanoengineering the built-in electric field of a photonic device by interstitial-ion diffusion. Physical Review B, 2012, 85, .	1.1	0

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73	Development of dilute nitride materials for mid-infrared diode lasers. Semiconductor Science and Technology, 2012, 27, 094009.	1.0	21
74	The differential effect of apoferritin-PbS nanocomposites on cell cycle progression in normal and cancerous cells. Journal of Materials Chemistry, 2012, 22, 660-665.	6.7	14
75	Bi-induced <i>p</i>-type conductivity in nominally undoped Ga(AsBi). Applied Physics Letters, 2012, 100, .	1.5	42
76	Nano-sized light emitting diodes by near field laser exposure. Applied Physics Letters, 2011, 98, .	1.5	7
77	Laser writing of the electronic activity of N- and H-atoms in GaAs. Applied Physics Letters, 2011, 99, 021105.	1.5	10
78	Cyclotron resonance mass and Fermi energy pinning in the In(AsN) alloy. Applied Physics Letters, 2011, 98, .	1.5	11
79	Magnetic Field Modulated Photoreflectance Study of the Electron Effective Mass in Dilute Nitride Semiconductors. AIP Conference Proceedings, 2011, , .	0.3	3
80	Imaging the photovoltaic response of PbSâ€sensitized porous titania. Physica Status Solidi (A) Applications and Materials Science, 2011, 208, 2450-2453.	0.8	3
81	Manipulating and Imaging the Shape of an Electronic Wave Function by Magnetotunneling Spectroscopy. Physical Review Letters, 2010, 105, 236804.	2.9	18
82	Hot electron transport and impact ionization in the narrow energy gap InAs1â^’xNx alloy. Applied Physics Letters, 2010, 96, 052115.	1.5	7
83	Using randomly distributed charges to create quantum dots. Physical Review B, 2010, 81, .	1.1	11
84	Photoluminescence of PbS nanocrystals at high magnetic fields up to 30 T. Physical Review B, 2010, 82, .	1.1	14
85	Self-Assembly of Electrically Conducting Biopolymer Thin Films by Cellulose Regeneration in Gold Nanoparticle Aqueous Dispersions. Chemistry of Materials, 2010, 22, 2675-2680.	3.2	35
86	Effect of low nitrogen concentrations on the electronic properties of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>InAs</mml:mtext></mml:mrow><mml:mrow><mml:mn>1</mml:r Physical Review B, 2009, 80, .	1.1	27
87	Large zero-field spin splitting in AlGaN/AlN/GaN/AlN heterostructures. Journal of Applied Physics, 2009, 105, .	1.1	21
88	Sensitive detection of photoexcited carriers by resonant tunneling through a single quantum dot. Physical Review B, 2009, 79, .	1.1	9
89	Growth and characterization of InAsN/GaAs dilute nitride semiconductor alloys for the midinfrared spectral range. Applied Physics Letters, 2009, 95, .	1.5	22
90	NEGATIVE DIFFERENTIAL VELOCITY IN ARTIFICIAL CRYSTALS PROBED BY HIGH MAGNETIC FIELDS. International Journal of Modern Physics B, 2009, 23, 2766-2768.	1.0	1

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91	Tailoring the electrical conductivity of GaAs by nitrogen incorporation. Journal of Physics Condensed Matter, 2009, 21, 174209.	0.7	4
92	LO phononâ€"plasmon coupled modes and carrier mobilities in heavily Se-doped Ga(As, N) thin films. Journal of Materials Science: Materials in Electronics, 2009, 20, 425-429.	1.1	1
93	Resonant tunneling through a dilute nitride quantum well. Physica Status Solidi C: Current Topics in Solid State Physics, 2008, 5, 198-202.	0.8	0
94	Electron effective mass and mobility in heavily doped n-GaAsN probed by Raman scattering. Journal of Applied Physics, 2008, 103, 103528.	1.1	17
95	Electron coherence length and mobility in highly mismatched III-N-V alloys. Applied Physics Letters, 2008, 93, .	1.5	17
96	High field electron dynamics in dilute nitride Ga(AsN). Applied Physics Letters, 2008, 93, .	1.5	7
97	Upconversion electroluminescence in InAs quantum dot light-emitting diodes. Applied Physics Letters, 2008, 92, .	1.5	22
98	PROBING THE SCATTERING POTENTIAL OF N-IMPURITIES IN GaAs BY MAGNETO-TUNNELING. International Journal of Modern Physics B, 2007, 21, 1600-1604.	1.0	0
99	Magnetoanisotropy of electron-correlation-enhanced tunneling through a quantum dot. Physical Review B, 2007, 75, .	1.1	20
100	Magnetophonon oscillations in the negative differential conductance of dilute nitrideGaAs1â^'xNxsubmicron diodes. Physical Review B, 2007, 75, .	1.1	12
101	Magnetic-field-induced Fermi-edge singularity in the tunneling current through an InAs self-assembled quantum dot. Journal of Experimental and Theoretical Physics, 2007, 105, 152-154.	0.2	4
102	Magnetic-field-induced Fermi-edge singularity in the tunnelling current through a self-assembled InAs quantum dot. Bulletin of the Russian Academy of Sciences: Physics, 2007, 71, 1127-1129.	0.1	0
103	Raman scattering in InAsâˆ•(AlGa)As self-assembled quantum dots: Evidence of Al intermixing. Applied Physics Letters, 2006, 88, 141905.	1.5	19
104	Novel regimes of electron dynamics in superlattices. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2006, 364, 3477-3492.	1.6	4
105	Optical study of resonant states in GaN x As1â^'x. Semiconductors, 2006, 40, 1162-1164.	0.2	0
106	Sharp-line electroluminescence from individual quantum dots by resonant tunneling injection of carriers. Applied Physics Letters, 2006, 89, 092106.	1.5	8
107	Stochastic Carrier Dynamics in Semiconductor Superlattices. Acta Physica Polonica A, 2006, 109, 43-52.	0.2	0
108	The resonant tunneling of holes through double-barrier structures with InAs QDs at the center of a GaAs quantum well. Semiconductors, 2005, 39, 543-546.	0.2	0

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109	Dilute Nitride Ga(AsN) Alloys: an Unusual Band Structure Probed by Magneto-Tunneling. AIP Conference Proceedings, 2005, , .	0.3	0
110	Electrical conduction properties of Ga(AsN) layers. AIP Conference Proceedings, 2005, , .	0.3	1
111	Observation of current resonances due to enhanced electron transport through stochastic webs in superlattices. AIP Conference Proceedings, 2005, , .	0.3	0
112	Raman scattering by LO phonon-plasmon coupled modes in heavily doped Ga(AsN). AIP Conference Proceedings, 2005, , .	0.3	0
113	Effect of hydrostatic pressure on the fragmented conduction band structure of dilute Ga(AsN) alloys. Physical Review B, 2005, 72, .	1.1	20
114	RESONANT TRANSPORT IN SEMICONDUCTOR SUPERLATTICES IN A TILTED MAGNETIC FIELD. , 2005, , .		0
115	Magnetic-Field-Induced Suppression of Electronic Conduction in a Superlattice. Physical Review Letters, 2004, 93, 146801.	2.9	13
116	Time-resolved photoluminescence of InAs quantum dots in a GaAs quantum well. Applied Physics Letters, 2004, 84, 3046-3048.	1.5	23
117	Magnetophotoluminescence study of the influence of substrate orientation and growth interruption on the electronic properties of InAsâˆ•GaAs quantum dots. Journal of Applied Physics, 2004, 96, 2535-2539.	1.1	13
118	RESONANT TRANSPORT IN SEMICONDUCTOR SUPERLATTICES IN A TILTED MAGNETIC FIELD. International Journal of Modern Physics B, 2004, 18, 3617-3620.	1.0	1
119	Investigation of radiative recombination from Mn-related states in Ga1âˆ'xMnxAs. Applied Physics Letters, 2003, 83, 866-868.	1.5	5
120	Magnetic-field-induced recovery of resonant tunneling into a disordered quantum well subband. Physical Review B, 2003, 68, .	1.1	11
121	Dependence of quantum-dot formation on substrate orientation studied by magnetophotoluminescence. Applied Physics Letters, 2002, 81, 1480-1482.	1.5	12
122	Magneto-Tunnelling Spectroscopy for Spatial Mapping of Orbital Wavefunctions of the Ground and Excited Electronic States in Self-Assembled Quantum Dots. Physica Status Solidi (B): Basic Research, 2001, 224, 715-722.	0.7	1
123	Piezoelectric Effects on the Electron-Hole Dipole in In0.5Ga0.5As/GaAs Self-Assembled Quantum Dots. Physica Status Solidi (B): Basic Research, 2001, 224, 37-40.	0.7	4
124	Universality of the Stokes Shift for a Disordered Ensemble of Quantum Dots. Physica Status Solidi (B): Basic Research, 2001, 224, 41-45.	0.7	8
125	Raman Characterization of MBE Grown (Al)GaAsN. Physica Status Solidi (B): Basic Research, 2001, 228, 283-286.	0.7	8
126	Anisotropy of electronic wave functions in self-assembled InAs dots embedded in the center of a GaAs quantum well studied by magnetotunneling spectroscopy. JETP Letters, 2001, 74, 41-45.	0.4	4

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127	Piezoelectric Effects on the Electronâ€“Hole Dipole in In0.5Ga0.5As/GaAs Self-Assembled Quantum Dots. , 2001, 224, 37.		1
128	Quantum States of Self-Assembled InAs Dots Probed by Magneto-Tunneling Spectroscopy. Acta Physica Polonica A, 2001, 100, 165-173.	0.2	0
129	Piezoelectric effects in In0.5Ga0.5As self-assembled quantum dots grown on (311)B GaAs substrates. Applied Physics Letters, 2000, 77, 2979-2981.	1.5	45
130	Quantum-dot phonons in self-assembled InAs/GaAs quantum dots: Dependence on the coverage thickness. Applied Physics Letters, 2000, 77, 3556-3558.	1.5	34
131	Spectral analysis of InGaAs/GaAs quantum-dot lasers. Applied Physics Letters, 1999, 75, 2169-2171.	1.5	29
132	Emission of electrons from the ground and first excited states of self-organized InAs/GaAs quantum dot structures. Journal of Electronic Materials, 1999, 28, 486-490.	1.0	33
133	High-temperature light emission from InAs quantum dots. Applied Physics Letters, 1999, 75, 814-816.	1.5	42
134	Emission energy and polarization tuning of InAs/GaAs self-assembled dots by growth interruption. , 0, , .		0
135	Control of the coalescence phenomena in InAs/GaAs quantum dots by using high-index planes. , 0, , .		0
136	InAs/GaAs quantum dot formation studied by magneto-photoluminescence spectroscopy. , 0, , .		0
137	A grazing incidence small angle X-ray scattering study of the effect of growth interrupt on the structure of InAs quantum dots. , 0, , .		0